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AFRL technologies featured at air show

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EDWARDS AIR FORCE BASE, Calif.— With crowds estimated to be over 250,000 for the two-day air show at Edwards, Air Force Research Laboratory technologies were featured throughout the static displays.

The Edwards air show was the first time that AFRL's corporate display trailer had traveled west of the Mississippi River. The trailer was part of an immense display that featured many of the accomplishments by AFRL technologists.

The hanger display, where the trailer was located, centered on the American Institute of Aeronautics and Astronautics' Wright Flyer Replica. This was the full scale 1903 model that was studied in recent wind tunnel tests. Adjacent to it was the AFRL/NASA F/A-18 AAW research aircraft that conducted a modern look at the Wright's wing-warping technology. The opposite corner of the hanger contained Team Edwards Air Force Flight Test Center's centerpiece and the Air Force's newest operational aircraft, the F/A-22.

The side of the trailer featured a steely-eyed eagle clutching the AFRL shield in its talons. Its sides expanded to provide a large showroom for AFRL technologies from across the nation. Visitors were introduced to a new battery for the B-2 Bomber, rocket propulsion research efforts, materials that formed a heavy-duty bulletproof vest, and devices that assisted pilots to multi-task without trying to find key-boards and triggers around the cockpit. As visitors departed the trailer, they entered the remainder of the AFRL sponsored display area. The area featured the larger local display of AFRL's Edwards Research Site and it rocket propulsion research efforts. The scale of their efforts was seen with the huge RS-68 liquid rocket engine capable of 650,000 pounds of thrust down to a Micro Pulsed Plasma Thruster for satellite propulsion.

The exhibit included the AFRL Decades of Research display. It was accompanied by the AFMC's Centennial of Flight history display that showed the evolution of air and space power from the earliest days of flight and the people who made it possible.

The exhibit included the Lockheed Martin Joint Strike Fighter mock-up and its AFRL technology derived F-135 jet engine and Boeing –Rocketdyne propulsion and power's space simulator.

Jet Propulsion Laboratory personnel displayed the mockups of the planetary explorers and explained to the audience that once the rovers landed like their Pathfinder predecessor, they would unfold and use Propulsion Directorate power division battery technology to create the 100-watts of power needed to propel the explorers across the planet's surface.

From a flight by the Wright Flyer that was no longer than the opening of the Edwards hanger where its replica sat, 120 feet in 12 seconds, to the propulsion that enabled the landing next year on Mars with the nation's newest explorers, the AFRL and its predecessors played a key role in developing and validating the technologies needed for the past 100 years of manned powered flight and the future. @